

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (currently amended) An antigenic peptide of less than 100 amino acids having an antigenic subsequence comprising ~~selected from the group consisting of~~ X-KSSGKLISL-X (SEQ ID NO: ~~1~~ SEQ ID NOS: 1 and 31), wherein X is independently an amino acid or sequence of amino acids with the proviso that X is not identical to the amino acid or amino acids naturally flanking the subsequences in human immunodeficiency virus-1 (HIV-1).

2. (previously presented) An antigenic peptide of claim 1, wherein the antigenic subsequence is X-KSSGKLISL-X (SEQ ID NOS: 1 and 31).

3. (withdrawn) An antigenic peptide of claim 1, wherein the antigenic subsequence is selected from the group consisting of EATVVYPAP (SEQ ID NO: 7), TKTLIYGGA (SEQ ID NO: 8), KRIVIGPQT (SEQ ID NO: 9), CCGCLTCSV (SEQ ID NO: 10), SGRLYCHESW (SEQ ID NO: 11), FALSHYDKP (SEQ ID NO: 12), and RPTLRFQGA (SEQ ID NO: 13).

4. (withdrawn) An antigenic peptide of claim 1, wherein the antigenic subsequence is selected from the group consisting of EGEFCCAGQLTCSVCGDPAK (SEQ ID NO: 17), CSGRLYCHESWC (SEQ ID NO: 18), and TKTLIYQGA (SEQ ID NO: 19).

5. (previously presented) An antigenic peptide of claim 1, wherein the antigenic subsequence is EGEFCKSSGKLISLCGDPK (SEQ ID NO: 14)

6. (currently amended) A vaccine comprising an antigenic peptide of less than 100 amino acids having an antigenic subsequence ~~selected from the group consisting of~~ X-KSSGKLISL-X (SEQ ID NOS: 1 and 31), wherein X is independently an amino acid or

sequence of amino acids with the proviso that X is not identical to the amino acid or amino acids naturally flanking the subsequences in HIV-1.

7. (previously presented) A vaccine of claim 6 wherein the antigenic subsequence is X-KSSGKLISL-X (SEQ ID NOS: 1 and 31) and wherein X is independently an amino acid that is not identical to the amino acid naturally flanking the subsequence in HIV-1.

8. (withdrawn) A vaccine of claim 5, wherein the antigenic subsequence is selected from the group consisting of EATVVYPAP (SEQ ID NO: 7), TKTLIYGGA (SEQ ID NO: 8), KRIVIGPQT (SEQ ID NO: 9), CCGCLTCSV (SEQ ID NO: 10), SGRLYCHESW (SEQ ID NO: 11), FALSHYDKP (SEQ ID NO: 12), RPTLRFQGA (SEQ ID NO: 13), EGEFCCAGQLTCSVCGDPAK (SEQ ID NO: 17), CSGRLYCHESWC (SEQ ID NO: 18), and TKTLIYQGA (SEQ ID NO: 19).

9. (currently amended) A vaccine of claim 6, wherein the antigenic subsequence is EGEFCKSSGKLISLCGDPK (SEQ ID NO: 14).

10. (original) A peptide of claim 1, wherein the antigenic subsequence comprises an antigenic determinant that does not give rise to HIV-1-specific antibodies to more than twelve other antigenic determinants on HIV-1.

11. (withdrawn) A method for raising antibodies against HIV-1, said method comprising an antigenic determinant selected from the group consisting of comprising administering to an animal competent to raise antibodies an amount of a X-KSSGKLISL-X (SEQ ID NO: 1), X-CNGRLYCGP-X (SEQ ID NO: 2), X-GTKLVCFAA-X (SEQ ID NO: 3), EATVVYPAP (SEQ ID NO: 7), TKTLIYGGA (SEQ ID NO: 8), KRIVIGPQT (SEQ ID NO: 9), CCGCLTCSV (SEQ ID NO: 10), SGRLYCHESW (SEQ ID NO: 11), FALSHYDKP (SEQ ID NO: 12), RPTLRFQGA (SEQ ID NO: 13), EGEFCKSSGKLISLCGDPK (SEQ ID NO: 14), EGEFCQTKLVCFAAAGDPAK (SEQ ID NO: 15), EGEFCCNGRLYCQPCGDPK (SEQ ID NO: 16), EGEFCCAGQLTCSVCGDPAK (SEQ ID NO: 17), CSGRLYCHESWC (SEQ ID NO: 18), and TKTLIYQGA (SEQ ID NO: 19),

wherein X is independently an amino acid or sequence of amino acids with the proviso that X is not identical to the amino acid or amino acids naturally flanking the subsequences in HIV-1, and further wherein the composition does not give rise to HIV-1-specific antibodies to more than twelve other antigenic determinants on HIV-1, said amount sufficient to raise antibodies in the animal.

12. (withdrawn) A method of claim 11, wherein the antigenic determinant is selected from the group consisting of EATVVYPAP (SEQ ID NO: 7), TKTLIYGGA (SEQ ID NO: 8), KRIVIGPQT (SEQ ID NO: 9), CCGCLTCSV (SEQ ID NO: 10), SGRLYCHESW (SEQ ID NO: 11), FALSHYDKP (SEQ ID NO: 12), RPTLRFQGA (SEQ ID NO: 13), EGEFCCAGQLTCSVCGDPAK (SEQ ID NO: 17), CSGRLYCHESWC (SEQ ID NO: 18), and TKTLIYQGA (SEQ ID NO: 19).

13. (withdrawn) A method of claim 11, wherein the antigenic determinant is selected from the group consisting of EGEFCKSSGKLISLCGDPK (SEQ ID NO: 14), EGEFCQTKLVCFAAAGDPAK (SEQ ID NO: 15), and EGEFCCNGRLYCQPCGDPK (SEQ ID NO: 16).

14. (withdrawn) A binding protein which specifically binds to a peptide selected from the group consisting of : KSSGKLISL (SEQ ID NO: 4), CNGRLYCGP (SEQ ID NO: 5), GTKLVCFAA (SEQ ID NO: 6), EATWYPAP (SEQ ID NO: 7), TKTLIYGGA (SEQ ID NO: 8), KRIVIGPQT (SEQ ID NO: 9), CCGCLTCSV (SEQ ID NO: 10), SGRLYCHESW (SEQ ID NO: 11), FALSHYDKP (SEQ ID NO: 12), RPTLRFQGA (SEQ ID NO: 13), EGEFCKSSGKLISLCGDPK (SEQ ID NO: 14), EGEFCQTKLVCFAAAGDPAK (SEQ ID NO: 15), EGEFCCNGRLYCQPCGDPK (SEQ ID NO: 16), EGEFCCAGQLTCSVCGDPAK (SEQ ID NO: 17), CSGRLYCHESWC (SEQ ID NO: 18), and TKTLIYQGA (SEQ ID NO: 19).

15. (withdrawn) A binding protein of claim 14, wherein the protein is an antibody.

16. (withdrawn) A method for inducing passive immunity in a host against HIV-1 said method comprising the step of administering an amount of antibody which specifically binds to a peptide selected from the group consisting of: KSSGKLISL (SEQ ID NO: 4), CNGRLYCGP (SEQ ID NO: 5), GTKLVCFAA (SEQ ID NO: 6), EATVVYPAP (SEQ ID NO: 7), TKTLIYGGA (SEQ ID NO: 8), KRIVIGPQT (SEQ ID NO: 9), CCGCLTCSV (SEQ ID NO: 10), SGRLYCHESW (SEQ ID NO: 11), FALSHYDKP (SEQ ID NO: 12), RPTLRFQGA (SEQ ID NO: 13), EGEFCKSSGKLISLCGDDPAK (SEQ ID NO: 14), EGEFCQTKLVCFAAAGDDPAK (SEQ ID NO: 15), EGEFCCNGRLYCQPCGDDPAK (SEQ ID NO: 16), EGEFCCAGQLTCSVCGDDPAK (SEQ ID NO: 17), CSGRLYCHESWC (SEQ ID NO: 18), and TKTLIYQGA (SEQ ID NO: 19), said amount sufficient to induce passive immunity against HIV-1.

17. (withdrawn) A method for detecting HIV-1 in biological sample said method comprising contacting the sample with an antibody which specifically binds to a peptide selected from the group consisting of: KSSGKLISL (SEQ ID NO: 4), CNGRLYCGP (SEQ ID NO: 5), GTKLVCFAA (SEQ ID NO: 6), EATVVYPAP (SEQ ID NO: 7), TKTLIYGGA (SEQ ID NO: 8), KRIVIGPQT (SEQ ID NO: 9), CCGCLTCSV (SEQ ID NO: 10), SGRLYCHESW (SEQ ID NO: 11), FALSHYDKP (SEQ ID NO: 12), RPTLRFQGA (SEQ ID NO: 13), EGEFCKSSGKLISLCGDDPAK (SEQ ID NO: 14), EGEFCQTKLVCFAAAGDDPAK (SEQ ID NO: 15), EGEFCCNGRLYCQPCGDDPAK (SEQ ID NO: 16), EGEFCCAGQLTCSVCGDDPAK (SEQ ID NO: 17), CSGRLYCHESWC (SEQ ID NO: 18), and TKTLIYQGA (SEQ ID NO: 19) in an amount sufficient to detect the presence of HIV-1 in a sample and determining the binding of the antibody to the protein in the sample.

18. (withdrawn) A method for detecting HIV-1-specific antibodies in a person suspected of being infected with HIV-1, said method comprising the step of incubating a biological sample from the person with an antigenic determinant selected from the group consisting of KSSGKLISL (SEQ ID NO: 4), CNGRLYCGP (SEQ ID NO: 5), GTKLVCFAA (SEQ ID NO: 6), EATVVYPAP (SEQ ID NO: 7), TKTLIYGGA (SEQ ID NO: 8), KRIVIGPQT (SEQ ID NO: 9), CCGCLTCSV (SEQ ID NO: 10), SGRLYCHESW (SEQ ID NO: 11),

FALSHYDKP (SEQ ID NO: 12), RPTLRFQGA (SEQ ID NO: 13), EGEFCKSSGKLISLCGDDPAK (SEQ ID NO: 14), EGEFCQTKLVCFAAAGDDPAK (SEQ ID NO: 15), EGEFCCNGRLYCQPCGDDPAK (SEQ ID NO: 16), EGEFCCAGQLTCSVCGDDPAK (SEQ ID NO: 17), CSGRLYCHESWC (SEQ ID NO: 18), and TKTLIYQGA (SEQ ID NO: 19) in an amount sufficient to detect the presence of antibodies which bind to the antigenic determinant and determining the binding of the antibody to the antigenic determinant.

19. (withdrawn) A method of selecting for antibodies specific to patients with long term nonprogression (LTNP) into AIDS said method comprising: (a) screening serum from LTNP patients for HIV-1-specific antibodies and comparing the antibodies to patients with AIDS.

20. (withdrawn) A peptide specific to antibodies from patients with long term nonprogression (LTNP) into AIDS, said peptide generated via a method comprising:

- (a) screening serum from LTNP patients for HIV-1-specific antibodies, and;
- (b) comparing the antibodies to patients with AIDS.

21. (withdrawn) A phage comprising a phagotope, wherein the phagotope further comprises an antigenic determinant specific to antibodies found in patients with long term nonprogression (LTNP) into AIDS.

22. (withdrawn) A phage of claim 21, wherein the antigenic determinant is selected from the group consisting of : KSSGKLISL (SEQ ID NO: 4), CNGRLYCGP (SEQ ID NO: 5), GTKLVCFAA (SEQ ID NO: 6), EATVVYPAP (SEQ ID NO: 7), TKTLIYGGA (SEQ ID NO: 8), KRIVIGPQT (SEQ ID NO: 9), CCGCLTCSV (SEQ ID NO: 10), SGRLYCHESW (SEQ ID NO: 11), FALSHYDKP (SEQ ID NO: 12), and RPTLRFQGA (SEQ ID NO: 13).

23. (withdrawn) A phage of claim 21, wherein the antigenic determinant is selected from the group consisting of EATVVYPAP (SEQ ID NO: 7), TKTLIYGGA (SEQ ID NO: 8), KRIVIGPQT (SEQ ID NO: 9), CCGCLTCSV (SEQ ID NO: 10), SGRLYCHESW (SEQ ID NO: 11), FALSHYDKP (SEQ ID NO: 12), and RPTLRFQGA (SEQ ID NO: 13).